



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
08/549,380	10/27/95	SMITH	C TRAK/02/222

THOMAS W HUMPHREY  
WOOD HERRON & EVANS  
2700 CAREW TOWER  
CINCINNATI OH 45202

83M1/1217

EXAMINER

ZANELLI, M

ART UNIT PAPER NUMBER

2304

DATE MAILED:

12/17/96

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

- ☐ Responsive to communication(s) filed on \_\_\_\_\_
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 1-40 is/are pending in the application.
- Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-40 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

Application Papers

- ☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☒ Notice of Reference Cited, PTO-892
- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s) 2546
- ☐ Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

Serial Number: 08/549380

Art Unit: 2304

### DETAILED ACTION

1. This application has been examined. The preliminary amendment filed 6/7/96 has been entered. Claims 1-40 are pending.
2. The prior art filed 2/26/96 has been entered. It is unclear to the examiner as to the relevancy of prior art references BA and BD since neither patent has anything to do with the disclosed and/or claimed invention.
3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
4. Claims 1-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. As per claim 1, the scope of the claim is indefinite since it is unclear from the claim as recited as to which elements of the system do not require human intervention. The claim preamble refers to a "system for controlling vehicles to provide transportation services" and the processing circuitry provides instructions to a vehicle to provide transportation service. The limitation "without human intervention" implies that the vehicles are remote controlled which is not commensurate in scope with the disclosure. The claim must clearly identify which aspects of the system are operated without human intervention.

Serial Number: 08/549380

Art Unit: 2304

B. As per claims 31 and 32, are vague as recited. The examiner suggests inserting the word --criteria-- before "demanded". Furthermore, the scope of the claim is vague since governmental or insurance entities have not in fact set any type of routing criteria (see spec., page 56-57). For the purposes of further examination on the merits, it is assumed that any generated information which can be used by the government or insurance companies to verify mileage is included within the scope of claims 31 and 32.

C. All claims depending from a rejected base claim are also rejected as containing the same deficiencies.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-6, 12, 13, 16, 18-24, and 27-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Nathanson et al. (5,122,959).

A. As per claim 1, Nathanson et al. disclose a transportation dispatch system with automated dispatching of service vehicles based on customer service requests. The system includes a database of records or transactions documenting needed transportation (see col. 12, section 4). A dispatching program automatically determines

Serial Number: 08/549380

Art Unit: 2304

the best candidate or vehicle to service the transaction based on various criteria such as current vehicle location, distance to the pick-up location, whether the vehicle is equipped to handle the transaction, etc. (see col. 16, section 3). All transactions which are to be serviced immediately (i.e., emergency transactions) are assigned deadlines such that the system monitors whether or not the call has been serviced in a timely manner. The system transmits dispatch instructions to service vehicles and receives location and status information in return. Each vehicle has a location determining system to determine the vehicle's position in real-time and a radio for transmitting the position to the dispatcher as well as the current status of the vehicle (i.e., en route to pick-up, pick-up confirmed, out of service, etc.) (see col. 4, section I; col. 7, section D; col. 19, section 6; and col. 21, section 8). The system disclosed by Nathanson et al. provides for the dispatching of service vehicles according to received transportation requests wherein the system automatically determines the best candidate vehicle for servicing the call based on stored information and real-time location and status data received from each of the vehicles. The system also monitors transactions designated as emergencies to insure that such transactions are serviced in a timely manner.

B. As per claims 2-4, as above wherein the system incorporates microcomputers performing multi-tasking operations such as dispatching and monitoring. As shown in Fig. 1A, the system uses microcomputers linked in a network such that information is

Serial Number: 08/549380

Art Unit: 2304

simultaneously accessible. Some microcomputers are linked in a parallel configuration to provide some redundancy in the system.

C. As per claims 5, 6, 12, and 13, as above wherein instructions are transmitted to and location/status information are received from the service vehicles via radio communication (see Figs. 1A-B and col. 6, section C). Since the location information is achieved through polling the vehicles, the information would have been received and stored in memory such that the system could keep track of where any one vehicle was at any particular time (see col. 6, section B). The system also receives confirmation information from the vehicle regarding service requests and whether the service has been completed (see col. 19, section 6). The system also provides for the manual entry of information to create a record (see col. 10, section A).

D. As per claim 16, the system enables one to dial 911 to initiate automatic location identification and generating a service request order (see col. 5, section A and col. 13, lines 18+).

E. As per claim 18, Nathanson et al. disclose using the system to dispatch ambulances and that selection of a candidate vehicle is based on whether the vehicle is equipped to handle the call (see col. 7, lines 18+ and col. 17, lines 1-2).

F. As per claim 19, as above wherein a dispatcher is alerted if a transaction designated as an "emergency" is not serviced in a timely manner (see col. 20, lines 52-60).

Serial Number: 08/549380

Art Unit: 2304

G. As per claims 20-23 and 30-33, as above wherein the system maintains information associated with the service transaction for billing purposes. As noted in col. 13, lines 50+, col. 14, lines 21+, and cols. 31-33, the system maintains billing information for a customer. If the customer has been serviced before, a rolodex containing that customer's account is automatically called up whenever a new request for service is received (see col. 10, section A). As noted in col. 32, section E, information required by the customer's insurance company for filing claims is included in the customer's record. As discussed in col. 14, line 21+, pricing for services is based on the requirements of the service call and the mileage. Since the dispatch program attempts to determine the minimum path between a pick-up and delivery location (see col. 18, section 5), any limitation that might be required in the future by the insurance company as to reasonable mileage charges would inherently be met by this minimum path consideration in routing vehicles. As noted in col. 7, lines 24-27, routing information is transmitted to the vehicle via radio transmission.

H. As per claim 24, as above wherein the vehicle status information includes at least information that the vehicle is not moving (i.e., broken down; see col. 30, lines 31-34).

I. As per claims 27-29 and 34-36, Nathanson et al. also provide for positioning vehicles for future transportation needs and indicating those positions for which

Art Unit: 2304

transportation will be lacking or out of position to provide optimum response time (see col. 28, section 10).

J. As per claims 37-39, as above wherein the vehicle operator has the ability to formulate a response to the routing instructions including any changes that may be required due to external conditions (see col. 19, section 6 and col. 29, section C).

These changes are received by the system and are used to amend the current routing or status of the vehicle. Again, as noted above, Nathanson et al. disclose using the system to pick-up and deliver patients to various locations such as hospitals and generating a log of pick-up and delivery as well as times (see col. 7, lines 18+ and col. 10, section A; see also table in col. 20).

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a

Art Unit: 2304

later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 14, 17 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nathanson et al. (5,122,959).

A. As per claims 14 and 17, Nathanson et al. are applied as above. As can best be determined from the Nathanson et al. disclosure, the system is physically located at the same location. However, the reference discusses networking the computers together as well as using telephone lines and modems to communicate information between the various processing circuitry of the system (see Fig. 1A and col. 4, section I). One of ordinary skill in the art of computer networking would have readily recognized that physically locating various components of the system at different locations would not depart from the overall teachings of the Nathanson et al. patent. Thus, locating the database records at one location and the dispatching and/or monitoring computers at another location would have been an obvious embodiment of the Nathanson et al. system wherein space limitations would have been one consideration.

B. As per claim 40, it would have been obvious to one of ordinary skill in the art that the dispatching system disclosed by Nathanson et al. could be applied to a variety of service vehicles (see col. 1, lines 6-10). Since applicants have not disclosed any additional considerations which must be provided when the system is used to control aircraft, it would have been obvious to one of ordinary skill in the art viewing the



Serial Number: 08/549380

Art Unit: 2304

Nathanson et al. patent that one could readily substitute one type of vehicle (i.e., ambulance) for another (i.e., aircraft) since the patent applies to service vehicles in general.

10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nathanson et al. (5,122,959) in view of Bolger (5,168,451).

A. Nathanson et al. are applied as above. Claim 15 differs in that information is entered into the system using a card reader.

B. At the time of applicants' invention, it was well-known in the art to use card readers to enter information into a computer-based system. For example, Bolger discloses a service request dispatch system which employs a card reader to input information from an identification card. This card may contain billing information and the cardholder's identity (see col. 7, lines 34+). It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate a card reader to input customer data because it would have allowed for faster and more convenient entry of data (see Bolger, col. 1, line 67 to col. 2, line 5).

11. Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nathanson et al. (5,122,959) in view of Gooch (5,396,540) and Vlcek et al. (5,493,694).

A. As per claims 7 and 8, Nathanson et al. disclose using ground based telephone lines as well as radio communication circuitry. The reference does not specifically disclose using satellite communications or satellite tracking circuitry.

Art Unit: 2304

B. At the time of applicants' invention is was well-known in the vehicle tracking and dispatching art to utilize satellites for both data communication between a mobile unit and a base station and the determination of a mobile unit's location. For example, Gooch discloses a system which utilizes cellular telephone technology and vehicle position determining means such as LORAN and GPS to transmit position data from the vehicle to the remote location (see Fig. 1; Summary and col. 3, lines 49+). Another system which utilizes satellite technology is found in Vlcek et al. (note Summary). Vlcek et al. further disclose applications in dispatching service vehicles such as delivery trucks and ambulances (see col. 5, lines 41-49).

C. One of ordinary skill in the art would have found it obvious to substitute the satellite-based communication technology of Gooch and Vlcek et al. for the land-based communication technology of Nathanson et al. because both would have provided the necessary means of providing communications and position determining wherein the satellite-based systems may provide greater coverage.

D. As per claims 9-11, as above wherein Nathanson et al. disclose keeping a log of vehicle movement and whether the customer has been picked-up (see col. 19, section 6).

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Serial Number: 08/549380

Page 11

Art Unit: 2304

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Michael Zanelli** whose telephone number is (703) 305-9756.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3800.

Fax communications can be received at (703) 308-5357. It is suggested that examiner be informed prior to transmission.

/mjz  
12\13\96

  
**MICHAEL ZANELLI**  
**PRIMARY EXAMINER**  
**GROUP 2300**